



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/700,263

11/03/2003

Darroll D. Bengtson

R11.12-0782

3685

7590

04/06/2005

David C. Bohn  
Westman, Champlin & Kelly  
Suite 1600  
900 Second Avenue South  
Minneapolis, MN 55402-3319

EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/700,286

263

Applicant(s)

KWON, YOUNG WUK

Examiner

Jewel V. Thompson

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/03/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

***Election/Restriction***

1. Applicant's election without traverse of claims 10-19 in the reply filed on January 21, 2005 is acknowledged.

***Information Disclosure Statement***

2. Acknowledgement is made of the Information Disclosure Statement filed October 17, 1998, which has been made record of and placed in the file.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dessert et al (6,257,071) in view of Cornil et al (6,199,434).

**Regarding claims 10 and 15**, Dessert et al teaches a vortex flow meter for installation between pipe flanges of size N, comprising: a vortex sensor assembly shaped to fit a standard sensor interface on a unitary flow tube (col.5, lines 9-11 and fig. 1); C. the unitary flow tube being formed as a unitary casting that is free of seams (fig. 1). Dessert et al fails to explicitly teach having upstream and downstream flow tube flanges of size N, and a bore of size number (N-A) where A is an integer in the range 1,2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the flange larger than the bore, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have provided a flange and bore in the range that allows the flange to be larger than the bore for the purpose of allowing the flow meter to mate with the systems that receive and/or provide the process fluid (col. 5, lines 9-11, Dessert). Dessert fails to teach having expanders coupling between the flow tube flanges and the bore. Cornil et al teaches the expander-regulator (col. 7, lines 26-28). It would have been obvious to one ordinary still in the art at the time that the invention was made to have used the expander of Cornil et al in the vortex flow meter of Dessert et al for the purpose of regulating the metering of gas so that there is no disturbance in the flow (col. 1, lines 11-14, Cornil)

**Regarding claims 11 and 16**, Dessert et al fails to teach a flow conditioner that comprises a plate perforated by multiple holes that is part of the unitary casting. Cornil

et al teaches a conditioner (10) comprising a perforated plate (104), which is part of the unitary casting (fig. 1). It would have been obvious to one ordinary still in the art at the time that the invention was made to have placed the straightener of Cornil et al in the flow meter of Dessert for the purpose of eliminating turbulence or other flow jet and rotation effects that can be imparted by the gas passing through the expander-regulator and through certain pipe elements situated upstream from the metering device such as double bends or Tees, for example (col. 7, lines 60-65, Cornil)

**Regarding claims 12 and 17**, Dessert fails to teach the plate has streamlined edges around the multiple holes. Cornil et al teaches in fig 10, the holes having streamlined edges. It would have been obvious to one ordinary still in the art at the time that the invention was made to have used the straightener having holes that provided streamlined edging of Cornil et al in the flow meter of Dessert et al for the purpose of eliminating any turbulence in the flow stream which provides a more accurate measurement.

4. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dessert et al in view of Cornil et al as applied to claim 10 above, and further in view of Khalifa (4,841,781).

**Regarding claims 13 and 18**, Dessert et al in view of Cornil et al fails to teach the flow conditioner comprising vanes having streamlined edges. Khalifa teaches a conditioner comprising vanes placed parallel to the axis of the vortex body (abstract). It would have been obvious to one ordinary still in the art at the time that the invention

Art Unit: 2855

was made to have used the conditioner having vanes of Khalifa in the flow meter of Dessert for the purpose of ensuring the reproduction of a desired turbulence level and mean fluid velocity profile in the plane perpendicular to the shedding body (abstract).

5. Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dessert et al in view of Cornil et al as applied to claim 15 above, and further in view of Matt et al (6,408,700).

**Regarding claims 14 and 19**, Dessert et al in view of Cornil et al fails to teach a measured calibration with the expanders, and flanges in place stored in the vortex flow meter. Matt et al teaches a flow meter comprising flanges (fig. 1) and a microprocessor (43), which stores a calibration factor (col. 7, lines 42-46). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have provided the microprocessor of Matt et al in the flow meter of Dessert et al for the purpose of storing the representative of the calibration factor in order to more accurately determine a flow rate which is transferred to an output (col. 7, lines 42-46, Matt)

### Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V. Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jvt

March 31, 2005